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Update from Dairy Science Curriculum

A.S. Leaflet R1974

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Animal Science

Summary and Implications

Introduction

The 2004 academic year has been one of considerable anticipation for dairy faculty and students. As reported in the 2004 Animal Industry Update, the ISU Dairy at Ames was closed in late 2003. The ISU Dairy at Ankeny became the site for teaching and research activities until a new farm can be opened. Progress on the new farm plan and on dairy faculty hires has been very positive and will be the basis for much of this report.

New faculty members have joined the teaching team and program-related building projects have begun to take shape. Student numbers in animal and dairy science undergraduate majors and graduate programs remained strong. University enrollment dropped by exactly 1,000 students between 2003 and 2004, but dairy science increased. Steady enrollment in animal and dairy science reflects confidence in the career market. Placement rate for dairy science, reported for the previous academic year, remained 100%. Salary information for 2004 projects average starting wage at about \$35,000. Selected enrollment data for fall 2004 are in Table 1.

Enrollment and Placement Update

Enrollment in Dairy Science was up in 2004 compared to 2003. The upturn may be related to two factors: a continuing strong career market and a significant number of transfer students now enrolling from the Northeast Iowa Community College dairy science major. Fall 2004 undergraduate enrollment figures for ISU were:

Dairy Science majors	49
Animal Science majors	501
General Pre-Vet students*	26
Total, Animal Science Department	576
Total, College of Agriculture	2,477
Total, ISU	26,380

*note: majors in animal or dairy science may declare pre-veterinary medicine, but the department also manages the undeclared pre-veterinary medicine program (General Pre-Vet) for the university.

During the previous full academic year, 17 dairy science students graduated. Eleven of the graduates were employed

in the dairy industry and six continued their education in either colleges of veterinary medicine or graduate study. Nine of the 11 students entering the career market remained in Iowa. Continuing its tradition of nation-wide impact, dairy science graduates were from as far east as New York and were placed as far west as California. A strong nation-wide internship program enhances dramatically the placement program for graduates.

Faculty Changes in Dairy Science

Dr. Diane Moody, from Purdue, joined the research faculty in animal breeding in genetics, specifically attached to the Center for Integrated Animal Genomics. Dr. Moody's research assignment will be in dairy genomics. Dr. Moody has a 25% teaching appointment and will begin teaching the undergraduate animal breeding and genetics course (AnS 352) in spring semester 2005. She will also develop a graduate-level course related to her science expertise.

The dairy faculty members were pleased to learn that one of the 2005 program priorities from the College of Agriculture will be support of the dairy research program. The current area of greatest need for addition of dairy faculty is research in nutrition.

Planning for the New ISU Dairy

Planning for the new ISU dairy farm is in the advanced architectural development stage. At the time of writing this update, purchase of land at the primary desired site for the farm had not been finalized, but was very near completion. A secondary site is available if any complications occur relative to the primary site. Each of the two potential sites is located close enough to campus to provide convenient access for education and research activities.

The dairy farm will house 500 milking cows for teaching, extension, and research activities. The farm will be financed by the sale of the existing ISU dairy property in Ankeny, Iowa. At this time a plan for timing and method of sale of the Ankeny property has not been determined.

The basis for the herd at the new ISU dairy will be the current ISU dairy herd at Ankeny, including cattle transferred from Ames in 2003, and the ISU Jersey herd that was transferred to the Northeast Iowa Community Based Dairy Foundation herd near Calmar. The plan for the new farm milking herd includes 350 Holsteins, 50 Brown Swiss, 50 Jerseys, and a combination of 50 cows from Ayrshire, Guernsey, and Milking Shorthorn breeds. A project is currently underway with the Brown Swiss Association to begin repopulation of the research herd via embryo transfer.

The projected schedule for farm construction calls for ground breaking to occur by fall 2005. If all goes well, cattle will be milked at the new farm starting sometime between fall of 2006 and spring of 2007.

Strategic Partnerships

Methods to increase the impact of the Iowa dairy industry, as well as growing the industry, have been critical topics for Iowa's dairy leadership during 2004. Two organizational meetings were sponsored by the Animal Science Department and the College of Agriculture to bring leaders together in an "Iowa Dairy Forum" to consider establishing protocols whereby the various dairy organizations in Iowa could create a framework to move forward statewide dairy initiatives.

The organizations coming together to create the Iowa Dairy Forum included: the Iowa Department of Agriculture and Land Stewardship, the Iowa Farm Bureau Federation, the Iowa State Dairy Association, the Iowa State Dairy Products Association, the Western Iowa Dairy Alliance, the Northeast Iowa Community-Based Dairy Foundation, and Iowa State University. The initiative is in the very beginning stages. Currently, mission statement, goals, and action items are being clarified. Through strength of organization and common purpose, the members of the Iowa Dairy Forum intend to bring greater value to the Iowa dairy industry.

On a regional and national level, Land Grant Universities are currently being challenged to be more efficient and effective in program delivery, whether programs be related to extension, research, or teaching. Budget cutbacks to most state universities have driven consideration of new ways to do business. Dairy extension at ISU has been a strong example of cooperative programming activity with Midwestern partnerships. Specifically, Universities of Illinois, Minnesota, and Wisconsin are regular partners in delivering four-state extension programs.

Consideration of a larger partnership for creating program efficiencies prompted agriculture administrators at ISU and the University of Minnesota to host two sessions of

"Multi-State Dairy Conference". The December 2004 session lead to an action plan to create a formal Consortium of dairy universities and organizations to "be a driving force to revitalize and grow the dairy industry in the Midwestern USA via innovative research, education, and outreach programs". The template being considered for organization and for delivering some program activities is the successful Midwest Poultry Consortium. A sample program suggested for action was development of a Master of Science-level management program in dairy. Universities attending the conference included: Iowa State University, Purdue University, North Dakota State University, Ohio State University, South Dakota State University, University of Illinois, University of Minnesota, University of Nebraska, and, University of Wisconsin.

Changes in the teaching program

Discussion

A strong job market, increasing undergraduate enrollment, new faculty, and a new dairy farm pending have the faculty and staff of 123 Kildee Hall focused on the future. The new dairy and a second pending project for a new livestock pavilion should have a significant positive impact on enrollment in both animal and dairy science curricula. The goal of the department is to hold minimums of about 60 undergraduate dairy majors and about 600 total undergraduate majors. With new facilities, those enrollment goals will be very achievable. The new farm and addition of research faculty will also enhance graduate student enrollment. For more information on the dairy science major or research and extension programs in dairy, please access the following web-sites:

<http://www.ans.iastate.edu/ugrad/homepage.html>

<http://www.public.iastate.edu/~ans/dairy/home.html>